CLAIM AMENDMENTS

This listing of claims will replace all prior versions, and

listings, of claims in the application:

Listing of Claims:

1. (currently amended) A diagnostic method for a technical

installation for determining a cause of a fault event described by a

fault state variable, the method which comprises:

establishing an operating state of the installation defined by state

variables, by determining diagnostic parameters each characterizing

one of the state variables;

compiling a dependency tree containing at least some of the

diagnostic parameters by configuring the dependency tree with the

following hierarchical levels numbered Hn, where n = 1, 2, ...:

a first hierarchical level containing a fault diagnostic

parameter characterizing a fault state variable,

a second hierarchical level, following the first hierarchical

level, and containing diagnostic parameters defining state

variables acting directly on the fault state variable,

a hierarchical level Hn+1, following a given hierarchical

level Hn, and containing diagnostic parameters defining state

variables acting directly on the state variables characterized

by the diagnostic parameters at the given hierarchical level

Hn;

determining a fault path in the dependency tree starting from the

fault diagnostic parameter, by identifying a responsible diagnostic

parameter at the hierarchical level Hn+1 depending on one of a

magnitude ~~and~~ or a change direction of a diagnostic parameter at the

given hierarchical level Hn; ~~and~~

inferring a cause of the fault from the responsible diagnostic

parameter identified in the identifying step at a last one of the

hierarchical levels; and

allocating one of a rising, a falling or a constant change direction

to each diagnostic parameter at the hierarchical level Hn+1, for

each diagnostic parameter at the given hierarchical level Hn, as a

function of a predefined change direction of the respective

diagnostic parameter at the given hierarchical level Hn, and

establishing the fault path by agreement between measured change

directions of the diagnostic parameters and the allocated change

directions.

2. (canceled)

3. (original)   The diagnostic method according to claim 1,
wherein the technical installation is a turbine installation.

4. (original)   The diagnostic method according to claim 3,
wherein the turbine installation is a gas turbine
installation.

5. (original)   The diagnostic method according to claim 3,
wherein the turbine installation is a steam turbine
installation.

6. (original)   The diagnostic method according to claim 3,
wherein the turbine installation is a combined gas and steam
turbine installation.

7. (original)   The diagnostic method according to claim 1,
which further comprises establishing the cause by utilizing a
wide area network.

8. (original)   The diagnostic method according to claim 1,
which further comprises establishing the cause by utilizing
the Internet.

9.(currently amended)   A diagnostic system for a technical installation for determining a cause of a fault event described by a fault state variable, the diagnostic system configured to:

establish an operating state of the installation defined by state variables, by determining diagnostic parameters each characterizing one of the state variables;

compile a dependency tree containing at least some of the diagnostic parameters by configuring the dependency tree with the following hierarchical levels numbered Hn, where n = 1, 2, ...:

a first hierarchical level containing a fault diagnostic parameter characterizing a fault state variable,

a second hierarchical level, following the first hierarchical level, and containing diagnostic parameters defining state variables acting directly on the fault state variable,

a hierarchical level Hn+1, following a given hierarchical level Hn, and containing diagnostic parameters defining state variables acting directly on the state variables characterized by the diagnostic parameters at the given hierarchical level Hn;

establish a fault path in the dependency tree starting from the

fault diagnostic parameter, by identifying a responsible diagnostic

parameter at the hierarchical level Hn+1 depending on one of a

magnitude ~~and~~ or a change direction of a diagnostic parameter at the

given hierarchical level Hn; ~~and~~

determine a cause of the fault from the responsible diagnostic

parameter identified in the identifying step at a last one of

the hierarchical levels; and

allocate one of a rising, a falling or a constant change

direction to each diagnostic parameter at the hierarchical

level Hn+1, for each diagnostic parameter at the given

hierarchical level Hn, as a function of a predefined change

direction of the respective diagnostic parameter at the given

hierarchical level Hn, and establish the fault path by

agreement between measured change directions of the diagnostic

parameters and the allocated change directions.

10.(currently amended) A diagnostic system for a technical

installation for determining a cause of a fault event

described by a fault state variable, the diagnostic system

comprising:

means for establishing an operating state of the installation

defined by state variables, by determining diagnostic parameters

each characterizing one of the state variables;

means for compiling a dependency tree containing at least some of

the diagnostic parameters by configuring the dependency tree with

the following hierarchical levels numbered Hn, where n = 1, 2, ...:

a first hierarchical level containing a fault diagnostic

parameter characterizing a fault state variable,

a second hierarchical level, following the first hierarchical

level, and containing diagnostic parameters defining state

variables acting directly on the fault state variable,

a hierarchical level Hn+1, following a given hierarchical

level Hn, and containing diagnostic parameters defining state

variables acting directly on the state variables characterized

by the diagnostic parameters at the given hierarchical level

Hn;

means for establishing a fault path in the dependency tree starting

from the fault diagnostic parameter, by identifying a responsible

diagnostic parameter at the hierarchical level Hn+1 depending on one

of a magnitude ~~and~~ or a change direction of a diagnostic parameter

at the given hierarchical level Hn; ~~and~~

means for determining a cause of the fault from the

responsible diagnostic parameter identified in the identifying

step at a last one of the hierarchical levels; and

means for allocating one of a rising, a falling or a constant

change direction to each diagnostic parameter at the

hierarchical level Hn+1, for each diagnostic parameter at the

given hierarchical level Hn, as a function of a predefined

change direction of the respective diagnostic parameter at the

given hierarchical level Hn, and establishing the fault path

by agreement between measured change directions of the

diagnostic parameters and the allocated change directions.